MERCHANDISING SUPPLEMENT
Electricity on the Farm

Vol. 3 JUNE, 1930 No. 6

The Job of the Farm Service Man

F. I. McElhoes, Vice-President of the Southwestern Light and Power Company recently made the following statement: "We are driven to the fact that one of our jobs is to build more industry on the farm. In other words, we must encourage the farmer to engage in those things which require the use of electricity. These things are not only necessary in order for him to use electricity but they are necessary in order for him to pay for the use of electricity. The big thought is that our commercial organizations can profitably spend time in helping the farmer to devise ways and means to make more money."

Mr. McElhoes has stated the case very clearly. It is not a question of selling the farmer more electrically operated equipment, just for the sake of building the load, but rather putting in his hands equipment which will make money for him. The future of farm electrification depends solely upon the soundness of the economic principles underlying it. It is always possible to sell a customer appliances which use current, and in instances, even overload him with appliances, but unless this equipment saves labor, or money, or both, no amount of argument can make the customer continue to use all of it regularly.

On the other hand, the moment a profitable application of electricity in farming is developed, and is fully understood by the farmer, the introduction is all that is needed, and the farmer will see that the equipment is used to its fullest extent.

Rural Electrification Progress

By DR. E. A. WHITE

Director of National Committee on the Relation of Electricity to Agriculture, Chicago, Ill.

ON an occasion such as this it is perhaps advisable that an attempt be made to obtain a perspective of the status of electric service for the farm.

Statistics furnish a convenient and useful yardstick for certain parts of the picture. According to the most reliable information which it is possible to obtain, nationally we should pass the ten per cent mark in number of farms served, this year. This means over 630,000. It is reported that there are approximately 10,000 farms in this state enjoying central station service. The other side of the picture is 250,000 farms still to be reached. Thus from the numerical standpoint in this state we need have no hesitancy in reaching the conclusion that electric service for the farm is still ahead of us. It constitutes one of the big developments for this electric light and power industry to look forward to.

Put Electricity to Work

Unfortunately, I do not have access to information regarding the amount of energy used per farm per year, but let us say it is 600 kw. hrs. This makes 6,000,000 kw. hrs. per year for the 10,000 farms. Quite a sum in the aggregate, but not nearly enough. To get any benefit out of electricity it must be put to work. On the basis of known developments, the Missouri farmer should be using five times the average used above, or 3,000 kw. hrs. per farm per year. In fact, this amount of energy can frequently be used in the farm home to advantage. Then there are the out-of-doors stationary power operations yet calling for energy. So it appears that we are probably not within eighty per cent of present potential possibilities as far as energy consumption is concerned, and when we recognize that there are farms using 12,000 kw. hrs. per year it can be seen that this figure of 3,000 kw. hrs. is conservative.

Standard Practices Studied

In the matter of developing farm uses for electric service, progress has been made. During the past seven years especial attention has been paid to this subject. As was logical and proper, attention was focused upon standard farm practices or operations. In one way or another we have conquered most of these stationary operations. Field work is still outside of our practical sphere. There is now electrically operated equipment available for nearly all farm operations in which the prime mover remains stationary. There are those who have been bold enough to say that our experimental work is nearly completed. I fear that those who make such a statement have little understanding of electrical history. There are few fields indeed into which electricity has gone where, over a period of years, its performances have not put all but the most amazing prophets to shame, both as to variety of uses and amount of energy used.

Take the matter of household use as an example. It was not so many years ago that many leaders in this industry were much concerned over the efficiency of the Mazda lamp resulting in a serious decrease in the total amount of

*(Delivered May 1, 1930, at the Annual State Convention of the Missouri Association of Public Utilities in Springfield, Mo.)

energy used. At that time electrical service in the home consisted almost exclusively of lighting. Look at the situation today—electric ranges, refrigerators, washing machines, ironing machines, vacuum sweepers, ice cream freezers, curling irons—almost a small army of electrically operated appliances have arisen to confound the prophets of twenty years ago.

First Stage Only

No, we have only gone through the first stage of developing electric uses for the farm. We have taken the machines and appliances which we found and applied the electric drive to them. The real development is still ahead of us. What will it be? Well, I do not know, but I am certain that the history of electricity in other fields will be repeated in agriculture. People are becoming interested in this problem. New ideas are being tried out. An electrically operated tractor is being built. Experimental hay driers are in operation. Some people believe that there is something in the electric treatment of the soil. Perishable farm products are going to the consumer's kitchen frozen solid. The ultra-violet ray lamp, once used only by the physician, is on the road to become a home convenience. The limiting factor here appears to be the ingenuity and ability of man—not unearthed possibilities for using electricity on the farm.

Believe in Electricity

If I should be asked to give one fundamental reason for believing in the future of electric service for the farm,the answer would be: The farmer and members of his family believe in electric service and want it." He sees in it an opportunity to modernize his home—make it just as convenient, as far as essentials are concerned, as any urban home. He considers it one of the essential means for bringing equality to agriculture. What the farmer wants in this respect he will strive to attain and no doubt ultimately reach the goal.

Further—and this fact is already being appreciated—electricity will put at the farmer's command energy in a most usable form for doing work. It will become a tremendous factor in reducing labor and speeding up operations to which it is adapted.

So, while we are worrying about the cost of rural lines and the securing of the capital with which to build them, while we are perplexed over bringing up the kw. hr. consumption per farm, while we are wondering how in the world we are ever going to reach even half of the farms in the State of Missouri, let us not lose sight of the fact that the farmer needs electric service and proposes to get it; let us be heartened by the fact that electric service can and will make a great contribution to agricultural development, and take courage from the fact that, almost without exception, electrical performance has far outstripped electrical prophecy.

Essentials for Development

Now for the consideration of a few essentials to keep this great development headed in the right direction: The first is man-power —men who believe in the proposition and are willing to work on it. Rural electrification will move in a much more satisfactory manner if it is supported by a company executive who has an interest in the development. Then there should be a full-time man in the electric light and power organization who carries the detailed responsibilities. The next step is a rate, and rules and regulations which are adapted to rural service. In general, these should be such as the farmer will accept, and produce sufficient revenue to justify the company in accepting the business.

Line construction specifications should be set at a happy medium, balancing initial cost against maintainance and upkeep, but in every instance affording service with good voltage regulation.

With these fundamentals taken care of, attention may well be directed to the division and district

(*Continued on page S 15*)

Merchandising Methods

Kansas Power & Light Company has Developed a Very Effective System of Merchandising to Its Farm Customers

BY H. S. HINRICHS
Rural Service Manager

ANY plan of selling electric equipment to Rural Customers is dependent upon the policy of Rural Electric Development followed by that particular Company. Therefore, a brief resume of these policies is pertinent to a discussion of the rural merchandising methods employed.

General Organization

All rural development activities carried on by our Company are handled by the Rural Service Department, responsible directly to the General Manager of the Company. These activities include securing new customers, the line construction necessary, and merchandising or load building. Such activities as relate to other specific departments are closely coordinated with other activities of the respective departments through the department heads. For example, rural lines are built in accordance with standards arranged by the Superintendent of Distribution. Plans for the sale of merchandise to rural customers are developed in cooperation with the Supervisor of Merchandise and the Local Sales Managers. In this way, the full cooperation of all departments and District Managers has been secured, which is extremely important in this formative period of Rural Development.

The rural salesmen report directly to the Rural Service Manager. Each rural salesman is responsible for the rural activities in his particular territory. This includes signing contracts, estimating line extensions, and selling merchandise. For the sale of merchandise, the rural territory is closed to other salesmen of the Company. This however includes only farm customers and does not apply to those customers living in the small towns served by the Company.

Personnel

The rural salesmen employed thus far have been college trained in agricultural engineering, and must have had some actual farm experience. Before starting upon a territory of their own these men have an opportunity of becoming acquainted with the policies of the Company, receive instruction in standards of line construction and methods of estimating costs of lines, study the data available relative to the various uses of electricity on the farm, and acquaint themselves with the equipment sold by the Company. Each rural salesman attends the merchandise sales meetings of the division office in his territory, in order to keep in touch with merchandise activities in that territory. At present the rural salesmen are taking the Power Sales Course being sponsored by the Commercial Section, N.E.L.A. which action was voluntary on the part of the respective salesmen.

These rural salesmen are paid a salary of $125 per month, plus a commission of 4% on the merchandise sold. The Company furnishes a car and pays the salesman's expenses when away from his headquarters town.

Equipment Sold to Farm Customers

The household equipment sold to farm customers in each district, is the same, and is sold on the same terms, as that sold to city customers. Special farm equipment, such as portable motors, electric brooders, water system, etc. are also sold by the Company

at prices and terms arranged by the Supervisor of Merchandise and the Rural Service Manager cooperatively. Electrically operated farm equipment such as silo fillers, milking machines and the like, are not generally sold by the Company. In such cases the cooperation of local implement dealers is secured. In special cases where a new type of farm equipment designed specially for electric operation is not available through local dealers, the Company sells the equipment until local dealers can be found who will push such equipment. This plan has been particularly valuable in securing the active cooperation of implement dealers.

Selling the Merchandise

One basic principle in our rural development programs is, that the prospective customer for electric service be sold on the idea of using electricity for some purpose in addition to lighting before his contract for service is accepted. Our experience shows that it is easier to sell an "electric consciousness" before the desire for "light" is satisfied than after that has been secured. The rural salesman does not in all cases sell equipment prior to connection, but in almost all cases he is able either to secure an order for equipment or a signed agreement from the prospective customer that the customer will secure certain specified equipment within a specified time after connection. In other words, a large amount of selling is done before or at the time a new customer is connected.

Subsequent to connection, sales calls are made largely on definite prospect tips. Such prospects are secured in various ways: viz—

1. From neighboring customers.
2. From calls coming to the local stores of the company.
3. From the regular mailing of ELECTRICITY ON THE FARM.
4. From demonstrations.

Some "cold canvassing" is done by the rural salesmen, particularly among rural customers that have been connected for a long period and therefore are not served on the new rural rate of the company. During such visits, the new rate is explained. Its advantages where larger quantities of energy are used is emphasized. Certain information concerning the customer's activities is also secured. Various applications of electricity are discussed in an effort to determine some one or more pieces of equipment in which the customer might be interested. A prospect card is then filed for a future call back in season for the particular pieces of equipment in which the customer has indicated an interest.

It is the desire of the rural department that calls be made on every rural customer at regular intervals, but owing to the extent of the territory each man must cover, this has not been possible. At the present stage of development of rural service in the territory, it is not considered economical to use enough men to make this possible at this time.

Advertising

Up to the present time with one or two exceptions, no direct advertising in local or trade papers has been used. The magazine "Electricity on the Farm" is mailed to all rural customers and prospects each month. This represents a call of the Power Company each month to sell an electric consciousness. It has been a very valuable piece of promotional publicity in developing our rural load.

Direct by mail circulars are sent to rural customers during every merchandise campaign in connection with mailings to city customers. In addition, special folders are sent to rural customers covering electrically operated farm equipment. This includes special mailing pieces prepared by manufacturers for rural customers.

Demonstrations

Last fall several local silo filling and feed grinding demonstrations were held in the various districts, in cooperation with a local implement dealer. In connection with these demonstrations the local merchandise organizations of the company conducted range and refrigeration demonstrations at the same farm at the same time. The

number of people attending these demonstrations was not large, but all present were seriously interested in the demonstrations and a satisfactory number of sales were made. Some customers traveled as much as twenty miles to attend these demonstrations so that a large number of communities were reached indirectly. This has been evidenced by comments received since.

Silo Filling Featured

In these demonstrations, silo filling was featured in the announcements. This was not based on the value of the use of electricity as a load builder for the company, but rather as the "feature attraction" for the show. Some farmers came out of curiosity to see a 5 or 7½ H.P. motor do a job which they were sure couldn't be done. The fact that it was done, stimulated considerable comment about the value of electric service for the power jobs about the farm, and the possibilities of the moderate sized motor.

During the past two years exhibits have been made at the State Fairs. Last year the exhibit was made under the auspices of the Kansas Committee on the Relation of Electricity to Agriculture and naturally was much more comprehensive than any one company could justify at this stage of development of rural service.

Results

There are several measures of the value of any plan of rural merchandising. One of these is the quantity of merchandise sold per meter, a second is kilowatt hours used per customer or gross revenue received. For our company the figures for 1929 are as follows:

Average gross merchandise sales per meter for all rural customers....	$46.50
Average gross merchandise sales per meter for the new customers connected during 1929....	91.30
Average amount of energy used per customer during 1929—all rural customers kw. hrs.....	864
Average amount of energy used per customer during 1929—rural customers on new rural rate (connected since October 1927)	1506
Average gross revenue received per customer during 1929—all rural customers	$67.20
Average gross revenue received per customer during 1929—customers on new rural rate (connected since October 1927)	$106.80

In presenting this outline of our rural merchandising program, we are cognizant of the fact that we have been "skimming the cream"; that if we are to continue on a satisfactory basis it will be necessary to improve the methods and the intensity of the effort. On the other hand, the possibilities of electric service on the farm have as yet been only touched. The opportunity for developing a profitable business for the company and of rendering a distinct service to agriculture is available. It is a tough job, but Oh what a market!

Distribution the Big Factor in Rural Service Costs

The total cost of generating electricity for rural service is only 10.1 per cent of the total cost of the service, according to a recent survey. In other words, it costs an average of nine times as much to transmit and distribute current to rural consumers as it does to produce the current itself, says the New York State Committee on Public Utility Information.

Analysis of rural service costs under ordinary conditions shows the following relative expenses, in terms of total power costs:

	Per cent
Generation	10.1
Transmission	5.1
Distribution	84.8

A fool there was and he saved his rocks, even as you and I; but he took them out of the old strong box when a salesman called with some wildcat stocks, and the fool was stripped down to his socks, even as you and I.

New York State Rural Business Committee Meets

The Rural Business Committee of the Empire State Gas and Electric Association met in the Van Curler Hotel on May 7th, 1930. Among those present were:

L. S. Caple, Rochester Gas & Electric Corp.; H. C. Fuller, Utica Gas & Electric Co.; D. E. Blandy, New York Power & Light Corp.; R. H. Denman, New York Power & Light Corp.; A. J. VanScorch, New York Power & Light Corp.; W. W. Jurden, Cortland County Traction Co.; R. G. Harvey, Syracuse Lighting Co.; F. M. Wigsten, Central Hudson Gas & Elec. Corp.; E. M. Thomas, International General Electric Co., Moscow; C. N. Moore, General Electric Co.; C. F. Bateholts, General Electric Co.; W. L. Harraden, General Electric Co.; E. W. Pilgrim, General Electric Co.; A. P. Danz, General Electric Co.; H. E. Mahan, General Electric Co.; F. T. Smith, General Electric Co.; I. R. Belloza, General Electric Co.; Walter A. Bowe, General Electric Co.; B. W. Faber, Westinghouse Elec. & Mfg. Co.; M. W. Nixon, Empire State Gas & Electric Association; C. H. B. Chapin, Empire State Gas & Electric Association; Marie Reith, Empire State Gas & Electric Association; K. H. Gorham, ELECTRICITY ON THE FARM, N. Y. C.

Better Lighting Discussed

The meeting opened with a discussion by Mr. H. E. Mahan of the Illuminating Laboratory, General Electric Company, on "Better Farm Lighting." Mr. Mahan stated that in industrial lighting the tendency is to get away from intangible values and to substitute increased production due to greater intensities of illumination. Similarly he felt that studies should be undertaken to determine the financial benefits of various lighting intensities for farm use and that lighting could then be sold on the basis of results obtainable.

Electric Hotbeds

C. N. Moore, Research Laboratory, General Electric Company, discussed electric hotbeds. He showed models and pictures of his experimental hotbeds which illustrated the construction of the bed and location of the heating elements. Mr. Nixon told of the results of his experiments at Ithaca. Sufficient data seemed to be at hand to permit immediate preparation of a bulletin on the subject and Mr. Moore and Mr. Nixon were asked to collaborate in the preparation of such a bulletin.

Heaters Tested

L. S. Caple told of some experiments which had been made by the Harris Seed Company in Rochester with electric heaters to prevent plants in cold frames from freezing. During the discussion it was brought out that the following points in connection with the subject of electric hotbeds required further study:

1. Control of temperatures—whether automatic or manual.
2. How close regulation is required.
3. What is the proper location of the temperature regulator (a) in the soil; (b) in the air in the hotbed, and (c) in the outside air.
4. What is the best construction of an electric hotbed.
5. Where should the heating elements be located.
6. Is artificial light necessary or desirable.
7. Is additional carbon dioxide necessary and if so, how should this be furnished.
8. What is the best type of insulation for the frame.
9. What ventilation is required.

L. S. Caple told of the plans for continuing the use of light traps at the Collamer Farms during the coming summer. He also stated that the Collamer Brothers claimed a noticeable difference in the appearance and quality of the fruit from the lighted portion of the orchard. Attention was called to the extent of the kilowatt hour load in the fruit-growing districts if this method of insect control could be recommended.

There was some discussion as to the best method of securing the slow speeds required for the operation of farm machinery and Mr. Faber called attention to various devices for speed reductions put out by Winfield H. Smith, Inc., Springville, N. Y.

Stationary spray outfits was another subject on the program and Mr. Wigsten suggested that the subject was of sufficient importance to be given detailed study and, after some general discussion,

the Chairman asked Mr. Caple and Mr. Wigsten to look into this question and to be prepared to report at the next meeting.

Mr. I. R. Bellaza, of the General Electric Company, showed samples and explained a new cable recently designed which would probably be useful for distribution on the farm. A bulletin describing the cable is in preparation and copies will be sent to the members when ready.

The next meeting of the Committee will be in Rochester on July 25th.

The delegates were the guests of the General Electric Company at luncheon and after lunch greatly enjoyed demonstrations of talking moving pictures and portable photophone at the General Electric Company plant.

Westinghouse Electrifies Experimental Farm

Believing that the farmer is desirous to operate his farm on a more efficient basis, the Westinghouse Electric & Manufacturing Company is undertaking an experimental farm near Pittsburgh. W. S. Rugg, Vice President in charge of Engineering, Westinghouse Electric and Manufacturing Company, in a recent statement said, "It seems more than a coincidence that farming, though one of the biggest American industries, is almost the only one that makes little use of electricity, and is also the one to have suffered perhaps the severest depression. Today in an electrified America, the farmer cannot hold his own by the sweat of human labor.

A Help to Profits

"Adapting electricity to farming is important to the farmer as a help to profits through higher efficiency, even without higher prices; and it is important to the electrical industry, as tapping the largest remaining reserve of possible customers. It is even more important to the country at large, which cannot permanently afford food produced at a loss, nor any avoidable handicap to the prosperity of so large a part of the population.

"Though making electricity generally available on the farm presents difficulties, I believe the problems can be solved at this farm. By rights, farm life should be both pleasant and profitable—universally available electricity will do more than any other one thing to make it so."

To put theory into practice the Westinghouse Electric and Manufacturing Company has completed arrangements to electrify the farm of J. L. Bauer of Jeanette, Pa. Already, to relieve himself of many manual tasks, Mr. Bauer is using electrical equipment. It milks the cows, cooks the milk, cleans, fills, and caps the bottles, turns the cream separator, and pumps water. In the house, electricity bakes waffles, makes toast, and turns the washing-machine.

It is planned to reduce Mr. Bauer's burden and increase his profits still further by the increased use of electrical equipment. Soon, electricity will grind feed, fill the silo, hoist the bale hay, heat water to sterilize dairy utensils, hatch chicks, mix concrete, test seed corn, saw wood, and grind meat.

Changes in Byllesby

John J. O'Brien, president of H. M. Byllesby and Company, announces that J. F. Gardiner has been appointed advertising and publicity manager of H. M. Byllesby and Company.

The following changes have also been announced through W. H. Hodge, vice-president and manager, Sales and Advertising Department of the Byllesby Engineering and Management Corporation: T. P. Pfeiffer appointed advertising manager of the Byllesby Engineering and Management Corporation and Standard Gas and Electric Company; and J. W. Hicks appointed publicity director.

"Laugh and the world laughs with you, weep—and you get a red nose."

Consider the fish. He seldom is hooked so long as he keeps his mouth shut.

One Million Electrified Farms Predicted

ELECTRIC service will be extended to a total of 1,000,000 farms in the United States within the next four years, it is declared by the Middle West Utilities Company in "Harvests and Highlines," a 112-page study of electric power in agriculture, which was published today.

Rural electric lines 150,000 miles in length are now in service and the number of farm electric customers reached in the last eight years is almost as great as the number of all kinds of electric users, at the end of the first twenty-five years of the history of the electric light and power industry, the book states.

While American farms in the aggregate have the largest power equipment of any other industry except the railroads, it is declared that electricity is the first effective application of power to the farmer's "chore" work, a comparatively neglected area of "farm problem" discussion which contains probabilities of marked improvement in agricultural prosperity. This kind of farm work, especially when concerned with livestock raising, offers the best present returns to the farm besides assuring future benefits through soil conservation, the study maintains.

"In providing a constant stream of pure water by automatic pumping, in feed grinding, in silage cutting, in hay hoisting, hay drying, and the preparation of poultry food, in the hatching and brooding of chicks, the milking of cows, the refrigeration of milk, and in scores of other barnyard functions, electrical practice is now well established," it is said.

Farm's Power Handicaps

The study traces much of the disparity between agricultural and industrial prosperity to the differences in the layout of power plant in farming as compared with the factory. The farmer's work is spread both in time and space, whereas manufacturing can be arranged and directed for maximum effectiveness in the application of power, the book points out.

"One reason," it is declared, "why the farmer's accomplishment has been difficult, and none too well rewarded in so many cases, may be found in the nature of his power plant and how it must be used both in space and time.

"Because of the scattered jobs he must do and the kind of power available for and fitted to such jobs, the farm power plant of 50,000,000 horsepower aggregate capacity is divided into something like 24,612,300 units, animal and machine. The average capacity per unit is therefore only a trifle more than two horsepower.

"It thus comes about that despite its enormous aggregate of power, farming still requires nearly two man hours of labor for every horsepower hour of work delivered by its vast multitude of animals and machines. On our farms every year about 30 billion man hours of work are required for every 16 billion horsepower hours delivered by animals and mechanisms. At the lowest estimate the work of women in the farm home totals another 15 billion 'woman hours'.

Farm Industry Scattered

"The division of the farm power plant into so many millions of units and its dispersion in space is of course the inevitable result of the scattered layout of the farming industry. It follows that to a great extent the handicaps of agriculture as compared to manufacturing in the utilization of power are mere reflections of the different layouts of the respective industries. Electric power, however, is applicable to the conditions of farm work."

The study also points out that even if the number of farms were reduced by the combination of small farms into large ones the situation would not be greatly changed because the work would still necessarily be dispersed over broad areas and also highly variable seasonally. From this the conclusion is drawn that the small farm stands to benefit particularly from the application of electri-

city to agriculture and that the family unit farm is likely to persist instead of being replaced to any great extent by mammoth farming enterprises.

"Because electric power is divisible and possesses the distinctive ability to reach small and scattered operations, users of small amounts of power can command as efficient a power supply as users of large quantities," it is stated. "In the application of electric power to agriculture, this is greatly to the advantage of the family-unit size of farm. So far as his power supply is concerned, the farmer need not adopt industry's large-scale methods at the very time that industry is taking advantage of the opportunity to modify them—an opportunity presented to it by the divisible and mobile type of power now at its command, and now being increasingly put at the command of the farmer as well."

Agricultural Engineers to Meet in First Extension Conference

Cooperative extension specialists in agricultural engineering will hold their first national conference at Urbana, Ill., June 11 to 14. The program includes discussion of extension methods and plans for developing agricultural engineering as it relates to the farm water supply, farm machinery, control of soil erosion, and related subjects. The engineers will also discuss plans for contacts both with adults and with young people.

These specialists are members of the organization in which the State agricultural colleges and the Federal Department of Agriculture cooperate to make the results of agricultural research available to farmers as quickly as possible. The increase of interest in the agricultural engineering phase of this cooperative extension work is indicated by the increase in funds made available for this line of work. In 1915 about $13,000 was expended in extension of agricultural engineering information. Nearly $200,000 is available for this purpose for 1930. Twenty-five of the State extension services now employ one or more agricultural engineering specialists. Reports to L .A. Jones, agricultural engineering specialist in the Extension Service of the U. S. Department of Agriculture, indicate that practically all of these States will be represented at the Urbana meeting.

Battery Men Meet

THE National Battery Manufacturers Association met in spring convention at the Hotel Sherman, Chicago, on April 24 and 25. Everyone in attendance agreed that for constructive results achieved, enthusiasm and effective action on the battery industry's problems, the meeting surpassed any in the history of the association.

This spirit of activity was reflected not only from the standpoint of work accomplished, but in the large and steady attendance of delegates at the convention's session. Approximately 150 representatives of leading manufacturers and suppliers of materials were registered. The program of addresses, reports of committees and the social features combined to make the two-day meeting a memorable achievement.

Association Aiding Industy

President Ward S. Perry, in his opening address on Thursday, April 24, pointed out the increasing contribution which the National Battery Manufacturers Association is making to the industry.

He complimented the members of the various committees for their work during the year and in closing urged a closer co-operation among the members in the association's efforts to elevate the industry.

Commissioner Parker then presented his report, setting forth the accomplishments of the association in its recent fight against the proposed tariff on antimony. He pledged continuing co-operation of the New York headquarters and urged the members to call on him

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The Cullman Drive is easy to install and the cost of operation is low. The patented load equalizer gives a natural pumping movement and permits the use of a smaller motor.

If the farmer desires a complete automatic pressure control system, you can add the Cullman Automatic Control and the Casing Head at any time.

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at all times for any assistance they require.

A feature of the Thursday morning session was the address by Harry A. Wheeler, vice-chairman of the First National Bank of Chicago and a nationally known authority on economic conditions.

Other features of the program were talks on technical aspects of the industry. These included:

"Battery Containers and Covers," by McConnel S. Hank of the B. F. Goodrich Company.

"Separators," by H. B. Jameson of the Arrow Mills Co.

"Sealing Compound," by T. M. Snyder of the H. H. Robertson Co.

"Battery Cables," by Dewey Farris of the Whitaker Battery Supply Co.

"Lead Oxides," by D. B. Murray, Eagle-Picher Lead Company.

The session of Friday morning, April 25, was devoted to the reading of reports by members of the association's committees, discussion and action on the recommendations made.

Trade Literature

Individual Water Systems: A 12-page booklet describing the various individual water system units manufactured by the Milwaukee Air Power Pump Company of Milwaukee, Wis. The Junior "B" and "C" Plants, as well as various possible layouts for these single-cylinder pump units is described and illustrated. The above equipment is adapted for use on farm, suburban home or rural institution.

Century Multi-speed and Portable Motors: The Century Electric Company of St. Louis, Mo., have just issued literature on their Multi-Speed squirrel cage induction polyphase motors and their Model D, Portable power Units. In the former, the arrangement of the winding in the stator is the only noticeable difference between the multi-speed motor and the standard squirrel cage single-speed motor. The features of the power units which are adaptable to many farm tasks are: one piece steel welded truck, motor size to meet power requirements, automatic resetting overload relay, 40 ft. of super-service power cable, three sizes of pulleys and crank-operated belt adjustment.

Ever-Oiled Water Systems: Gould Pumps, Incorporated, of Seneca Falls, N. Y., have just issued a very attractive 56-page booklet on their Ever-Oiled water systems. It is profusely illustrated and describes in detail the units and the various parts thereof. Accessories applicable for use with such are also illustrated and described. Those interested in the installation of water systems on farms will, no doubt, find useful data in this booklet.

Convention Dates

C. R. E. A. RURAL ELECTRIFICATION PROJECT DIRECTORS at Moline, Ill., June 13, 14. Dr. E. A. White, Director, 1120 Garland Bldg., Chicago, Ill.

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS, at Moline, Ill., June 16-19. Raymond Olney, Secretary, St. Joseph, Mich.

NATIONAL ELECTRIC LIGHT ASSOCIATION, at San Francisco, Calif., June 16-20. J. Marshall, 400 Lexington Ave., New York City.

INTERNATIONAL BABY CHICK ASSOCIATION, at Detroit, Mich., July 7-10. Reese V. Hicks, Managing Director, 3223 Troost Ave., Kansas City, Mo.

NATIONAL ASSOCIATION OF FARM EQUIPMENT MANUFACTURERS, annual convention, Congress Hotel, Chicago, Ill., October 8-10. H. J. Sameit, Secretary, 608 S. Dearborn St., Chicago, Ill.

New Water Heater

The Standard Electric Stove Company of Toledo, Ohio, have just placed on the market their new storage electric water heater, No. 2618. Capacity, 18 gallons; wattage, 1600 or 2000; either automatic or clock control; finish, grey lacquer.

Slicker—Nice corn crop you have there.

Native—Yeh, about thirty-five gallons to the acre.

—Carnegie Tech Puppet

MINNETONNA HOME BUTTERMAKER

Each farmer in your community is a prospect for this COMPLETE butter maker. Not "new"—on the market for years. Churns and works like big factory churns. Built by Dairy Industry's largest equipment builder. Electric motor or belt drive. 12 and 20 gallon sizes. Write for bulletin and dealer proposition.

THE CREAMERY PACKAGE MFG. COMPANY
1253 W. Washington Blvd.
Chicago Illinois

Blue Ribbon Electric Milker

A Portable Milker Requiring No Installation

The "Blue Ribbon" is a self-contained milker, requiring no pipe lines or extra equipment of any kind. It operates direct from the light socket of either high line or farm light plant. A beautiful catalog and complete information will be sent on request. Write us today.

Electric Products Corporation
7 Bluff Ave., La Grange, Ill.

Indexes for Volumes I and II

A COMPLETE index of both Volumes I and II of ELECTRICITY ON THE FARM is now available. Copies will be furnished to any interested upon request.

And why not make it easy to find what you want by keeping each year's issues together in a binder? We have a special one with the words ELECTRICITY ON THE FARM printed in gold ink on the cover. The cost is only $1.50.

Please address your requests either for the free index or the binders to Book Department Editor, ELECTRICITY ON THE FARM, 24 West 40th St., New York City.

BROWER'S VIOLET LIGHT BROODER

With New Heat Control $8.50

Brower's Electric "Save-All" fully automatic brooders raise from 10 to 20% more chicks. Less attention, labor, time. Many exclusive features. Galvanized steel, with asbestos-filled, heat-saving lining and metal warmth-deflector. Pilot bulb is violet; heating unit enclosed, guaranteed. Special thermometer. Brower's heat control saves current. Shipped complete with cord, ready for socket. Order direct, if in a hurry, at these prices. State voltage.

75 day old chick cap.	$ 8.50
125 day old chick cap.	9.75
300 day old chick cap.	13.50
600 day old chick cap.	18.00
1000 day old chick cap.	22.00

Write for BIG CATALOG showing over 350 items including Electric Storage Brooders, Feed Mixers, Alarms, Fountain Heaters, Time Switches, Heating Elements, Automatic Controls, Oat Sprouters, Egg Testers, and Sprayers.

BROWER MFG. CO., Dept. 3538, Quincy, Ill.

DEALERS—Write for proposition.

Bob's Page

Devoted to Merchandising of Electrical Equipment in Rural Communities

Conducted by Robt. J. Fulton

What the High Line Means

ELECTRIC power in any form awaits the throw of a switch.

Let Mr. Rural customer or prospect for electrical applicances realize that when he turns on a switch in his electric line, he has the entire organization of the Power Company at his command. Let him realize that one of the chief hazards of an Electric Company is the necessity for investing far in advance of returns. Power lines penetrate to sparsely settled neighborhoods — pioneering the way towards continuous expansion —power lines awaiting the pressing of a button to give light and power to the smallest of homes in the country or to the largest of factories.

You can go to a store for merchandise. If the merchant is out of the item you wish you either go to another store or wait for the first merchant to order it for you and then you may carry the goods away if you desire. The Power Company cannot serve that way. It must always have on hand a reserve of kilowatts for immediate sale.

It works when you push the button—it reduces labor costs—it eliminates drudgery—it saves human energy and it improves home life. At a cost of 33⅓ cents a day or $10.00 a month, 150 kilowatt hours of electricity will do the following daily and weekly operations:

Lighting — ironing — washing — pumping water — vacuum cleaning — separating the cream — and churning	15	cents
Refrigeration	10	"
Milking 10 cows	5	"
Elevating corn — grinding feed, etc.	3 1/3	"
Total per day	33 1/3	cents

Compare the cost of this service at 33 1/3 cents with the following ordinary farm costs.

Keeping one horse one day.

One hour's farm labor.

Owning and driving a car about six miles.

One-third hour of mechanics' labor on car.

One and two-thirds gallons gasoline.

One and two-thirds quarts of oil.

One-half cost of making a tire repair.

* * *

How many power jobs has the farmer than he can take care of by having connection for both his home and at the barn?

He can grind his feed, pump water, spray, mix concrete, saw wood, shell corn, elevate grain, employ it in the farm shop, fill silos, turn the grindstone, fanning mill, the pressure water system, the hay baler, cane mill, milking machine, cider press, for hoisting hay, for operating the washing machine, the cream separator, the churn, and also for the clipping machine.

Mechanical power is the foundation of profitable farm operations. Labor is far too costly and valuable to be utilized for hand power jobs that can be done better, cheaper and more quickly with electric power.

New Hot Water Heater

Announcement has been made of a new hot water heater put on the market by the Hot Shot Electric Water Heater Corp., 520 N. Michigan Ave., Chicago. This simple device fits right over the cold water faucet. "A turn of the handle and you get an unlimited supply of hot water. It plugs conveniently into the nearest electric light socket."

Rural Progress

(Continued from S 3)

organizations of the company, making certain that the men in executive positions thoroughly understand the company policies and have their organiaztions in shape to give constructive attention to this business. It is important to have a man to whom farmers can be referred.

The next step is to have a plan for developing the business and selling equipment. By one means or another see that the farmer has an opportunity to secure the proper equipment and information which will result in satisfactory performance.

A Farm Service Calendar

The New York Power & Light Company his distributed a very attractive calendar to its farm customers, illustrating many of the proven uses of electricity in farming. Accompanying each calendar mailed was the following announcement:

"So many of our Farm Customers have written enthusiastically about one or another of the services of electricity on the modern farm, that we have designed this calendar to illustrate and describe a few of these uses. The illustrations are reproduced from photographs made on New York State farms. Many of you will be able to identify one or more of the pictures.

"Although many uses of electricity are illustrated on the various pages of this calendar, they represent but a small fraction of the 227 ways in which electricity can help the farmer. If you would like to know more about any of the services of electricity illustrated or described, or if you seek information on some use not shown on this calendar, consult the Rural Service Representative of your Power Company. The benefit of his knowledge and experience is yours for the asking without obligation of any kind. Very cordially yours,

RURAL SERVICE DIVISION."

A Ready Demand Among Farmers!

A **DEALER** must handle products that have a good demand.

Universal Farm Light Batteries are well known through years of advertising. Thousands of farmers use them and thousands more know about them.

Take advantage of this demand and sell Universal Batteries.

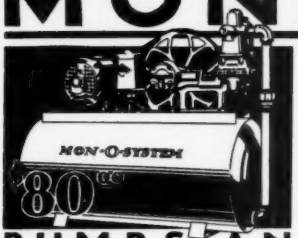
Write for Our New Catalog No. 75-F and Prices

UNIVERSAL BATTERY COMPANY
3414 S. LaSalle Street
CHICAGO, ILL.

Batteries for Every Purse and Purpose

Automobile—Radio—Farm Light Parts for all makes of Batteries Shop Equipment

MONARCH



The new MON-O-SYSTEM sets new standard of values in lower price range.

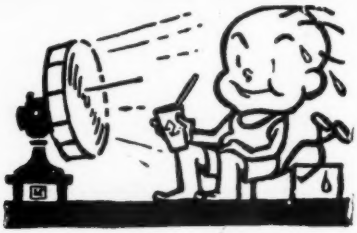
Your opportunity to meet competition on its own ground—offer more for the money.

Monarch standard of excellence in manufacture maintained. Profits not frittered away on service calls.

Cap. 250 gal. per hr.
Oversize tank—20 gal.
—all for only $80.00

The Monarch Engineering Company
Dayton, Ohio

PUMPS AND SYSTEMS



Farmers are Thirsty!

Yes, thirsty for electric service and the comforts and advantages it will bring them.

Despite the fact that central stations are extending their lines rapidly and adding 100,000 farmers and more to their lines every year, there are still millions of farmers that can't get service for some years yet.

Are you equipped to sell electric service to these prospects. There is a type of Home Lighting Plant to meet every farmer's requirements. Use the coupon on the inside back cover, listing types on which you'd like data.

A. Engine Driven Sets
B. Water Wheel Driven Sets
C. Wind Mill Driven Sets
D. Storage Batteries for Plants

This coupon is for your convenience →